



propellants ... **1979** Train derailment at Sturgeon, MO, results in spill of ortho-chlorophenol; \$56 million settlement ... Region
1980 Comprehensive Environmental Response, Compensation, and Liability Act (commonly referred to as Superfund) provides

CLEAN LAND

Region 7's landscape varies from the semi-arid grasslands of the High Plains in western Kansas and Nebraska to lush, rolling hills in the western Corn Belt plains of eastern Iowa; and from the Ponderosa Pine ridges of northwestern Nebraska to the oak-forested hills of the Missouri Ozark Highlands.

Most of Iowa, eastern Kansas, northern Missouri, and eastern Nebraska have been converted to cropland. Significant areas of remaining shortgrass prairie in the western reaches are managed as rangeland for livestock production. Dryland farming during the early part of the century, followed by extensive development of groundwater and surface water resources during the past four decades for cropland irrigation, continues to reduce remaining rangeland areas.

Municipal Solid Waste

Across the country, many states, communities, businesses, and individuals have found creative ways to reduce and better manage municipal solid waste through a mix of practices that includes source reduction, recycling (including composting), and disposal.

Everyone knows that reducing waste is good for the environment. What most don't know is that solid waste reduction and recycling help stop global climate change. How? By decreasing the amount of heat-trapping greenhouse gases that are linked to everyday trash.

Solid waste reduction and recycling are important parts of pollution prevention efforts in Region 7. Four of the most important programs are WasteWise, Jobs Through Recycling, Pay-As-You-Throw, and Landfill Standards.

Climate Change Impacts

A solid waste grant in Iowa was used to examine the impact of solid waste management options on greenhouse gases in Iowa. Iowa's 1995 solid waste diversion levels resulted in greenhouse gas benefits that were larger than half of the priority options identified in Iowa's Climate Change Action Plan. This is particularly significant because these reductions have already been achieved, well in advance of the state's 2010 target date.

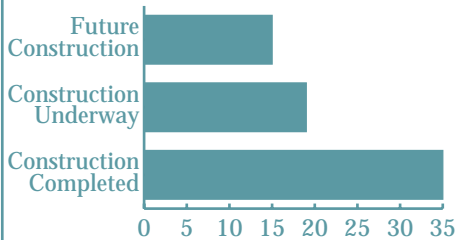
Hazardous Waste Cleanup: Superfund

Years ago, people did not understand how certain wastes or practices might affect their health and the environment. In response to citizens' growing concern over health and environmental risks posed by closed or abandoned hazardous waste sites, Congress established the Superfund Program in 1980. Some common hazardous waste sites include abandoned warehouses, manufacturing facilities, processing plants and landfills.

Hazardous wastes sites are initially identified and reported by a variety of sources, such as citizens; businesses; local, tribal and state governments; EPA and other federal agencies. When a potential

hazardous waste site is reported, EPA screens the site to determine what type of action is necessary. Some sites do not require any action. Others are referred to the states, to other EPA programs, to other federal agencies, or to those responsible for cleanup or other action.

National Priority List Sites
in Region 7



To date, 3,085 potential hazardous waste sites have been identified in Region 7. Approximately 2,489 (about 81 percent) of these sites have been assessed and removed from EPA's inventory, because they required no further action.

For some sites, Region 7 performed on-site investigations including the testing of the soil, water, and air to determine what hazardous substances were left at the site, and how serious the risks may be to human health and the environment.

Of the 69 Region 7 sites that have been listed on the National Priorities List, 54 (78 percent) have the final remedy in place or under construction.

Times Beach

Reborn as Missouri Park

Some sites take several decades to clean up. The Times Beach Superfund site, southwest of St. Louis, was a formerly incorporated town where roads were sprayed with waste oil for dust control in the early 1970s. Region 7 confirmed the site was contaminated with dioxin during a 1982 investigation. Twenty-six eastern Missouri properties were also sprayed with the contaminated oil.

The nearby Meramec River flooded Times Beach in 1982. Residents were forced to evacuate. The Centers for Disease Control recommended that the residents who evacuated, as well as those who returned following the flood, be permanently relocated. EPA transferred \$33 million to the Federal Emergency Management Agency for the permanent relocation of residents and businesses in 1983. By the end of 1986, all residents were permanently relocated.

Cleanup consisted of excavating the contaminated soil from all

sites and storing it at Times Beach until a permanent remedy was identified. EPA selected incineration as the permanent remedy to destroy the dioxin. An incinerator was brought to the Times Beach site in 1996.

The incinerator operated from March 1996 to June 1997. More than 263,000 tons of dioxin-contaminated material were treated. Once the operation was completed, the incinerator was demobilized and removed, and the site was restored.

The Times Beach site is now Missouri Route 66 State Park, which opened on September 11, 1999.



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The Removal Program

The highest priority of the Superfund program is to make hazardous sites safe for those who live or work nearby. These activities may include temporarily relocating people, providing people with

alternative drinking water, and securing sites to eliminate human risks. Superfund's removal program delivers a quick, limited-cost response to

immediate threats posed by the release of hazardous substances.

Region 7 receives an average of 1,110 hazardous substance release notifications a year. It is advantageous for private companies or parties to assist in cleanups and avoid additional expenses. EPA steps in only if state and local authorities exhaust all efforts and resources to address a hazard or to identify Potentially Responsible Parties (PRPs).

Pesticides

Few chemicals have had as much impact or been the subject of as much controversy in recent decades as pesticides. A pesticide is any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest. Pests include insects, mice and other animals; unwanted plants (weeds); fungi; or micro-organisms like bacteria and viruses. Many household products are pesticides.

One of the primary goals of the pesticides program is to ensure the proper application and use of pesticides. In Region 7, approximately 5,500 private and 4,500 commercial pesticide applicators were certified in 1999, and an additional 29,000 private and 9,300 commercial applicators were re-certified.

Hazardous Waste Management

Americans make and dispose of chemicals and waste products in

large quantities. Since 1945, the amount of waste generated in the United States has multiplied more than 500 times.

The Resource Conservation and Recovery Act (RCRA) regulates hazardous wastes through their entire life cycle. Hazardous wastes are those which are ignitable, corrosive, reactive (explosive), and toxic. Many other wastes are listed as hazardous based on their source.

Region 7 has 100 facilities ranked high for corrective action cleanup. Twenty of these facilities are in Iowa, 22 in Kansas, 36 in Missouri, and 22 in Nebraska. Region 7 has achieved human health protection for 18 percent of the facilities, just under the 1999 national goal of 20 percent. For migration of contaminated

groundwater, Region 7 has achieved controls at 17 percent of high-ranked facilities, well ahead of the 1999 interim goal of 10 percent.

While progress on these short-term cleanup indicators has been good, much work remains to ensure that all immediate and long-term risks associated with these facilities have been addressed.

Underground Storage Tanks

The national strategic plan for the Underground Storage Tank (UST) program has three key goals: to complete the cleanup of leaking tank sites; to prevent future leaks with corrosion protection and leak detection devices; and to approve state programs to replace the federal program.

Underground Storage Tanks at a Glance

